

STATEMENT OF BASIS

as required by LAC 33:IX.3109, for draft Louisiana Pollutant Discharge Elimination System Permit No. LA0038962; AI 4677; PER20050002 to discharge to waters of the State of Louisiana as per LAC 33:IX.2311.

The permitting authority for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

- I. **THE APPLICANT IS:** City of Mansfield
Mansfield Sewage Treatment Facility
P.O. Box 773
Mansfield, LA 71052
- II. **PREPARED BY:** Ronda Burtch
- DATE PREPARED:** January 27, 2006
- III. **PERMIT ACTION:** reissue LPDES permit LA0038962; AI 4677; PER20050002
LPDES application received: December 1, 2005
LPDES permit issued: February 1, 2001
LPDES permit expired: January 31, 2006

IV. FACILITY INFORMATION:

- A. The application is for the discharge of treated sanitary wastewater from an existing publicly owned treatment works serving the City of Mansfield.
- B. The permit application does not indicate the receipt of industrial wastewater.
- C. The facility is located at 2472 George Hunt Road in Mansfield, De Soto Parish.
- D. The treatment facility consists of a twenty-two (22) acre facultative lagoon followed by a biological aquatic plant filter and a microbial rock plant filter. Recirculation is optional prior to disinfection. Disinfection is provided by two (2) banks of ultraviolet lamps.
- E. Outfall 001

Discharge Location: Latitude 32° 03' 23" North
Longitude 93° 43' 08" West

Description: treated sanitary wastewater

Design Capacity: 0.75 MGD

Type of Flow Measurement which the facility is currently using:

Combination Totalizing Meter / Continuous Recorder

V. RECEIVING WATERS:

The discharge is into Bayou NaBonchasse, thence into Clear Lake in segment 100605 of the Red River Basin. This segment is not listed on the 303(d) list of impaired waterbodies.

The designated uses and degree of support for Segment 100605 of the Red River Basin are as indicated in the table below^{1/}:

Overall Degree of Support for Segment 100605	Degree of Support of Each Use							
	Partial	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
		Full	Full	Not Supported	N/A	N/A	N/A	Full

^{1/}The designated uses and degree of support for Segment 100605 of the Red River Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2004 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 100605 of the Red River Basin, is not listed in Section 11.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated October 21, 2005 from Watson (FWS) to Gautreaux (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit modification and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Ms. Ronda Burtch
Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

IX.

PROPOSED PERMIT LIMITS:

Subsegment 100605, Lake Edwards and Smithport Lake, is not listed on LDEQ's Final 2004 303(d) List as impaired, and to date no TMDLs have been established. A reopener clause will be established in the permit to allow for the requirement of more stringent effluent limitations and requirements as imposed by any future TMDLs.

Final Effluent Limits:

OUTFALL 001

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
BOD ₅	63	10 mg/l	15 mg/l	Limits are set in accordance with the Statewide Sanitary Effluent Limitations Policy (SSELN) for facilities of this treatment type and size.
TSS	94	15 mg/l	23 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.

Other Effluent Limitations:

1) Fecal Coliform

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) pH

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C., the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

X.

PREVIOUS PERMITS:

LPDES Permit No. LA0038962: Issued: February 1, 2001
Expired: January 31, 2006

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Daily Avg.</u>	<u>Daily Max.</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Report	Report	Continuous	Recorder
BOD ₅	10 mg/l	15 mg/l	1/week	3-hr Composite
TSS	15 mg/l	23 mg/l	1/week	3-hr Composite
Fecal Coliform Colonies	200	400	1/week	Grab
pH	6.0 (min)	9.0 (max)	1/week	Grab

XI.

ENFORCEMENT AND SURVEILLANCE ACTIONS:

A) Inspections

A review of the files indicates the following inspections were performed during the period beginning January 13, 2004 and ending January 13, 2006 for this facility.

Date - December 7, 2004

Inspector - LDEQ

Findings and/or Violations -

1. The WWTP was operating efficiently at the time of the inspection.
2. The plant consists of a one-cell pond, about 23 acres in size, followed by parallel rock reed units and UV light disinfection.
3. Samples are taken at the appropriate location.
4. Some permit non-compliance was reported in the last year.

Date - October 27, 2005

Inspector - LDEQ

Findings and/or Violations -

1. The WWTP is classified as a major facility with a design flow capacity of 0.75 MGD.
2. The WWTP is an oxidation pond with a rock/reed filter system and UV disinfection.
3. Operation and maintenance was rated unsatisfactory due to the following deficiencies:
 - a. Accumulation of vegetation and tree growth in the rock filter system causing clogging/blockages
 - b. Flow meter was not reading within the allowable +/- 10% of actual flow. The meter was reading -14.9% of actual flow.
4. The facility's DMRs revealed several permit exceedances. Permit exceedances were reported in August and September 2005 for TSS concentrations and fecal coliform. Also, BOD₅ and TSS loading exceedances were reported in February 2005.
5. Facility personnel are using incorrect effluent flow data when calculating BOD₅ and TSS loadings (#'s/day). Loading calculations are reported using 3-hr averages during their composite sampling instead of gpd during the 24-hr period.
6. Facility personnel collect effluent samples and analyze effluent pH. The facility operator's pH readings are reported on their DMRs. A pH meter calibration log is not maintained.

B) Compliance and/or Administrative Orders

A review of the files indicates the following most recent enforcement actions administered against this facility:

LDEQ Issuance:

Docket # - WE-CN-05-0081

Date Issued - May 23, 2005

Findings of Fact:

1. The Respondent owns and/or operates a publicly owned treatment works (POTW) located at 2472 George Hunt Road in Mansfield, De Soto Parish, Louisiana.
2. On or about May 19, 1995, the Respondent was issued National pollutant Discharge Elimination System (NPDES) permit LA0038962, with an effective date of June 1, 1995, and an expiration date of May 31, 2000. In accordance with the assumption of the NPDES program by the state of Louisiana, NPDES permit LA0038962 became Louisiana Pollutant Discharge Elimination System (LPDES) permit LA0038962. The Respondent submitted a permit renewal application in a timely manner; therefore, LPDES permit LA0038962 was deemed administratively continued.
3. The Respondent was reissued LPDES permit LA0038962 effective February 1, 2001, and which expires on January 31, 2006. Under the terms and conditions of LPDES permit LA0038962, the Respondent is authorized to discharge treated sanitary wastewater into Bayou NaBonchasse, thence into Clear Lake, both waters of the state.
4. A file review of the DMRs was conducted by the Department on or about April 18, 2005, for the monitoring periods of January 2001 through February 2005.
5. A file review conducted on or about April 25, 2005, revealed that the DMRs for the monitoring periods September 2004 through February 2005 were signed by the City Clerk who does not have signatory authority.

Order:

1. To immediate take, upon receipt of the Compliance Order, any and all steps necessary to meet and maintain compliance with LPDES permit LA0038962, specifically to operate within permit limits.
2. To submit to the Enforcement Division, corrected DMRs signed by either a principal executive officer or ranking elected official for the monitoring periods mentioned in the findings of fact.
3. The Respondent shall submit a comprehensive plan for the expeditious elimination and prevention of noncomplying discharges and the noted deficiencies.
4. To submit to the Enforcement Division, a written report that includes a detailed description of the circumstances surrounding the cited violations and actions taken or to be taken to achieve compliance with the Order Portion of the Compliance Order.

C) DMR Review

A review of the discharge monitoring reports for the period beginning December 1, 2003 through November 30, 2005 has revealed the following violations:

DATE	PARAMETER	PERMIT LIMIT	SAMPLE VALUE
February 2004	TSS (avg. loading)	94 lbs/day	110.8 lbs/day
March 2004	TSS (avg. loading)	94 lbs/day	103.6 lbs/day
April 2004	BOD ₅ (avg.)	10 mg/l	10.4 mg/l
	BOD ₅ (max.)	15 mg/l	16.5 mg/l
June 2004	TSS (avg. loading)	94 lbs/day	120.3 lbs/day
	TSS (max.)	23 mg/l	27.6 mg/l
	Fecal Coliform (max.)	400 col/100 ml	2,170 col/100 ml
July 2004	Fecal Coliform (max.)	400 col/100 ml	867 col/100 ml
October 2004	TSS (avg. loading)	94 lbs/day	136.2 lbs/day
	TSS (avg.)	15 mg/l	22.8 mg/l
	TSS (max.)	23 mg/l	29.6 mg/l
	BOD ₅ (max.)	15 mg/l	15.4 mg/l
	Fecal Coliform (max.)	400 col/100 ml	644 col/100 ml
November 2004	BOD ₅ (avg. loading)	63 lbs/day	77.6 lbs/day
	TSS (avg. loading)	94 lbs/day	144.8 lbs/day
	Fecal Coliform (max.)	400 col/100 ml	2,400 col/100 ml
February 2005	BOD ₅ (avg. loading)	63 lbs/day	109.3 lbs/day
	BOD ₅ (avg.)	10 mg/l	10.7 mg/l
	TSS (avg. loading)	94 lbs/day	199.2 lbs/day
	TSS (avg.)	15 mg/l	19.4 mg/l
July 2005	BOD ₅ (avg.)	15 mg/l	24.36 mg/l
	Fecal Coliform (max.)	400 col/100 ml	800 mg/l
August 2005	TSS (avg.)	15 mg/l	24.96 mg/l
	TSS (max.)	23 mg/l	45.20 mg/l
	Fecal Coliform (max.)	400 col/100 ml	484 col/100 ml
September 2005	BOD ₅ (avg.)	10 mg/l	10.1 mg/l
	TSS (avg.)	15 mg/l	19.9 mg/l
	TSS (max.)	23 mg/l	28.4 mg/l
	Fecal Coliform (max.)	400 col/100 ml	800 col/100 ml

October 2005	BOD ₅ (avg.)	10 mg/l	10.9 mg/l
	BOD (max.)	15 mg/l	22 mg/l
	TSS (avg.)	15 mg/l	22.2 mg/l
	TSS (max.)	23 mg/l	23.6 mg/l
November 2005	TSS (avg.)	15 mg/l	17.4 mg/l
	TSS (max.)	23 mg/l	23.2 mg/l

XII. ADDITIONAL INFORMATION:

The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon water quality studies. These studies may indicate the need for **advanced/more advanced** wastewater treatment. Studies of similar dischargers and receiving water bodies have resulted in monthly average effluent limitations of 5 mg/l CBOD₅, and 2 mg/l NH₃-N. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 0.75 MGD.

Effluent loadings are calculated using the following example:

$$\text{BOD: } 8.34 \text{ lb/gal} \times 0.75 \text{ MGD} \times 10 \text{ mg/l} = 63 \text{ lb/day}$$

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit are standard for facilities of flows between 0.50 and 1.00 MGD.

<u>Effluent Characteristics</u>	<u>Monitoring Requirements</u>	
	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Continuous	Recorder
BOD ₅	1/week	3 Hr. Composite
Total Suspended Solids	1/week	3 Hr. Composite
Fecal Coliform Bacteria	1/week	Grab
pH	1/week	Grab

XIII. TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in this Statement of Basis.

XIV. REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations,

Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, City of Mansfield, Mansfield Sewage Treatment Facility, December 1, 2005.